

Remarks

Reconsideration and allowance of this application, as amended, are respectfully requested.

Claims 10-24 have been amended. Claims 10, 21, and 24 are independent. Claims 10-29 remain pending in the application. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein. No new matter has been introduced through the foregoing amendments.

Claims 10-24 have been amended to even more distinctly claim Applicant's machine and method as being directed to flexographic printing. Claim 14 has been amended to more particularly point out and distinctly claim the suction source feature.

Entry of each of the amendments is respectfully requested.

35 U.S.C. § 112, Second Paragraph

The rejection of claim 14 under 35 U.S.C. § 112, second paragraph, is respectfully deemed to be obviated. Claim 14 has been amended to define a flexographic machine that includes "a suction source for increasing a volume of the gas flowed onto the ink transfer roller."

As the examiner acknowledges, Applicant discloses the use of "suckers [i.e., suction devices] for supporting evaporation of the solution" (specification page 3). Applicant discloses that

"[w]ith aid of such a sucker the volume stream of an appropriate gas, for example air, led by the ink transfer roller is increased so that even here there is an exchange of enriched ambient air with solutions." That is, when used in conjunction with Applicant's "blower that flows a gas onto the ink transfer roller" (claim 12), the claimed suction source (claim 14) suctions the blower-flowed gas across the ink transfer roller so as to provide enhanced gas circulation and thus even more efficient solvent evaporation. Applicant respectfully submits that the location and operation of the suction source would be evident to one skilled in the art.

Reconsideration and withdrawal of the rejection of claim 14 under § 112, second paragraph, are respectfully requested.

35 U.S.C. § 103(a) – Adachi and Hornschuh

Claims 10, 11, 18-26, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 6,546,866 B1 to Adachi et al. (hereinafter "Adachi") in view of US 2001/0021420 A1 of Hornschuh et al. ("Hornschuh").

The rejection of claims 10, 11, 18-26, and 29 under § 103(a) based on Adachi and Hornschuh is respectfully traversed. The combined disclosures of Adachi and Hornschuh would not have rendered obvious Applicant's claimed invention.

The combined disclosures of Adachi and Hornschuh do not teach all of Applicant's claim features. Applicant's claim 10 defines a machine that includes in pertinent part "a mechanism for

effecting evaporation of the solvent from at least one ink transfer roller." The Office Action correctly acknowledges that "Adachi does not teach a mechanism for effecting evaporation of the solvent from at least one ink transfer roller."

Adachi is directed to an ink viscosity measurement device and an ink viscosity measurement method. Contrary to the examiner's assertion, Adachi does not teach that the intensity of the ink applied to the print substrate is adjustable by effecting the solvent evaporation. Instead, Adachi simply mentions that water has been known to evaporate during circulation of the ink, thus leading to a rise in the ink viscosity (column 1, lines 60-65). This evaporation of water is a natural effect. Adachi does not teach actively effecting the solvent evaporation so that the ink mixture ratio is influenced in a controlled way.

The disclosure of Hornschuh does not rectify the above-described deficiencies of Adachi. Like Adachi, Hornschuh simply mentions that the solvent tends to evaporate (para [0011]), and that, therefore, the ink film changes permanently during the duration of the entire printing process (para [0013]). Hornschuh does not teach a mechanism for effecting evaporation of the solvent from at least one ink transfer roller.

Additionally, there is simply no teaching in either Adachi or Hornschuh that would have led one to select the references and combine them, let alone in a way that would produce Applicant's claimed invention. Applicant's claimed invention is

not directed to the passive evaporation process mentioned in both Adachi and Hornschuh. Instead, an object of Applicant's invention is to actively increase or accelerate the evaporation process if the color density is to be increased. Neither Adachi nor Hornschuh addresses this object, let alone the claimed machine used to effect the object.

Applicant's independent claims 21 and 24, and their respective dependent claims, are similarly allowable. Claim 21 defines a machine that includes in pertinent part "a mechanism for effecting evaporation of the solvent from the ink on the ink transfer roller so as to provide a second ink mixture having less solvent than the first ink mixture." Claim 24 defines a method that includes in pertinent part the step of "effecting evaporation of the solvent from the ink on the ink transfer roller so as to adjust the ink mixture ratio, and thereby adjust the intensity of the ink applied to the print substrate."

35 U.S.C. § 103(a) - Adachi, Hornschuh, and Grosshauser

Claims 12, 13, 16, 17, 27, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Adachi in view of Hornschuh, and further in view of US 4,753,165 to Grosshauser.

The rejection of claims 12, 13, 16, 17, 27, and 28 under § 103(a) based on Adachi, Hornschuh, and Grosshauser is respectfully traversed. The combined disclosures of Adachi, Hornschuh, and

Grosshauser would not have rendered obvious Applicant's claimed invention.

For all of the reasons explained above in response to the rejection based on Adachi and Hornschuh, the combined disclosures of Adachi and Hornschuh do not teach all of Applicant's claim features.

The disclosure of Grosshauer does not rectify the above-described deficiencies of Adachi and Hornschuh. Grosshauer discloses an offset printing machine, which is different in structure and function from Applicant's claimed flexographic printing machine. These differences were explained in detail in Applicant's response filed September 22, 2006. Because of these differences, Grosshauser's device does not meet, *inter alia*, Applicant's claim 10 requirements of "an ink reservoir containing ink having a mixture ratio of color pigments and a volatile solvent," and "a mechanism for effecting evaporation of the solvent," with "the intensity of the ink applied to the print substrate being adjustable by effecting the solvent evaporation so as to adjust the ink mixture ratio."

Additionally, there is simply no teaching in any of Adachi, Hornschuh, and Grosshauser that would have led one to select the references and combine them, let alone in a way that would produce Applicant's claimed invention. Grosshauer discloses an offset printing machine, which is different in structure and function from Applicant's claimed flexographic printing machine.

There is, therefore, no teaching in Grosshauer that would have led one to arrive at a mechanism for effecting evaporation of the solvent, let alone according to Applicant's claimed invention.

35 U.S.C. § 103(a) - Adachi, Hornschuh, and Hahne

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Adachi in view of Hornschuh, and further in view of US 6,285,032 B1 to Hahne.

Applicant first notes that the PTO-892 Notice of References Cited that accompanied the outstanding Office Action does not list the Hahne reference. Applicant requests that a corrected Notice of References Cited accompany the next communication from the U.S. Patent and Trademark Office.

The rejection of claim 15 under § 103(a) based on Adachi, Hornschuh, and Hahne is respectfully traversed. The combined disclosures of Adachi, Hornschuh, and Hahne would not have rendered obvious Applicant's claimed invention.

For all of the reasons explained above in response to the rejection based on Adachi and Hornschuh, the combined disclosures of Adachi and Hornschuh do not teach all of Applicant's claim features.


Regardless of what Hahne may disclose with regard to the removal of gaseous laminar boundary layers, the disclosure of Hahne does not rectify any of the above-described deficiencies of Adachi and Hornschuh.

Additionally, there is simply no teaching in any of Adachi, Hornschuh, and Hahne that would have led one to select the references and combine them, let alone in a way that would produce Applicant's claimed invention. Hahne is directed to the removal of gaseous laminar boundary layers, not Applicant's claimed machine with a mechanism for effecting solvent evaporation that is "a source of electromagnetic radiation that irradiates the ink on the ink transfer roller." There is, therefore, no teaching in Hahne that would have led one to arrive at a mechanism for effecting evaporation of the solvent, let alone according to Applicant's claimed invention.

In view of the foregoing, this application is now in condition for allowance. If the examiner believes that an interview might expedite prosecution, the examiner is invited to contact the undersigned.

Respectfully submitted,

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Date: May 21, 2007